

Message

From: stephen scott [stephen.scott@res-ses.com]
Sent: 3/13/2020 2:25:25 PM
To: Ex. 6 Personal Privacy (PP)
CC: Lloyd Lipman [lloyd.lipman@res-ses.com]; Bloeth, Mark [Bloeth.Mark@epa.gov]
Subject: FW: Applicability Determination Review re: Gasification Unit at City of Covington WWTP for gasification of medical waste only to HMIWI rules (NSPS 40 CFR Part 60, Subpart Ec) - Volunteer Env. Services (VES) - Facility ID 84-0124

Flag: Follow up

Hello Mark,

Thank you so much for our conversation this morning. Since you are the expert extraordinaire regarding the gasification unit in Covington, Tn, I do appreciate your help in answering the questions below from Mr. Mark Bloeth from the EPA. This will allow Mr. Bloeth to provide the TDEC's requested letter of Applicability Determination from the EPA. This will go far in advancing The City of Covington's and our Air Quality permit application process to change the waste stream to Medical Waste. If you have any questions, please do not hesitate to call me or Lloyd. I have included Lloyd and Mr. Bloeth in this email train for you to have their emails.

Thank You,

Stephen Scott
President
Volunteer Environmental Services
901-666-9330

From: Bloeth, Mark <Bloeth.Mark@epa.gov>
Sent: Wednesday, March 4, 2020 1:26 PM
To: stephen scott <stephen.scott@res-ses.com>
Cc: Lusky, Katy <Lusky.Kathleen@epa.gov>; Davis, Amber <Davis.Amber@epa.gov>
Subject: FW: Applicability Determination Review re: Gasification Unit at City of Covington WWTP for gasification of medical waste only to HMIWI rules (NSPS 40 CFR Part 60, Subpart Ec) - Volunteer Env. Services (VES) - Facility ID 84-0124

sorry, there was a typo below ... the discussion with TDEC occurred on February 27th, not in January.

From: Bloeth, Mark
Sent: Monday, March 02, 2020 2:37 PM
To: 'stephen scott' <stephen.scott@res-ses.com>
Cc: Lusky, Katy <Lusky.Kathleen@epa.gov>; Davis, Amber <Davis.Amber@epa.gov>
Subject: Applicability Determination Review re: Gasification Unit at City of Covington WWTP for gasification of medical waste only to HMIWI rules (NSPS 40 CFR Part 60, Subpart Ec) - Volunteer Env. Services (VES) - Facility ID 84-0124

Hi Mr. Scott,

I received your voicemail from today and wanted to update you on my review activities and propose some additional questions to VES.

On ~~January~~ February 27, 2020 I had a discussion with the Tennessee Department of Env. and Conservation (TDEC) – Division of Air Pollution Control regarding the above subject for which VES was required to submit a new non-Title V Permit application involving the newly proposed gasification of medical waste (specific unit identified as Gasifier GS-200). There was some initial confusion on my part regarding the waste stream(s) since VES submitted a permit application (signed/dated 1/13/2020) to TDEC to include both medical waste and/or pharmaceutical wastes; this was

contrary to what I understood from you last month. TDEC did forward to me a recent updated permit application (signed/dated 2/24/2020) which eliminated the pharmaceutical waste, now only indicating VES's intention to use "Regulated Medical Waste" as the only feedstock to the gasifier.

During the conversation with TDEC I posed some questions to them about the gasification process, flow schematics and other parameters for this facility; TDEC did not have detailed specifics and/or were not completely sure about some of the details to my questions.

As a start, I will need clarification from VES about the following points in order for EPA to move forward on an applicability determination specific to HMIWI:

- When was the date of initial installation of the PHG Gasifier System at the City of Covington WWTP?
 - Also, the Attachment IA document in the permit application(s) mentions three PHG gasifier models (PHG-8, PHG-12 and PHG-LF), which model is "GS-200" considered being and what are the differences between them?
- Attachment IA initially describes the PHG Gasifier System Design's potential waste streams as "organic biomass ... such as urban wood waste, wood chips, and municipal solid waste" and a history of success with differing biomasses described as: "wood chips, urban wood waste, bark/hog fuel, tire derived fuel (blend), paper cubes, waste glycerol (blend) and cotton stalks." Now that VES is applying for a permit to completely change over the waste stream to regulated medical waste, is there any historical data showing that this PHG Gasifier System (or any particular PHG gasifier model) has also been proven effective or successfully demonstrated for the gasification of medical waste? Given the wide variety types and heterogenous nature of medical waste there are potential concerns for this type of waste stream being processed through a system what seems to have been primarily designed primarily for woody biomass, municipal waste, and at times sewage sludge?
 - I say this because the secondary submission of the Attachment IA document has been recently modified from the original PHG Gasifier System Design document (perhaps as old as 2005) to now reference the feedstock as "medical waste" (see comparative changes at 2nd paragraph) as though PHG is promoting it as a viable / demonstrated waste stream.
- There is a process flow schematic dated 07/23/12 referencing PHG Energy LLC; has there been any currently updated process flow schematics since the City of Covington acquired ownership of the gasification plant?
 - I ask this because there was mention of some apparent history of fires at the gasification plant and I would like to know when and to what extent any new installation and/or necessary repairs to damaged equipment from these fires occurred which could potentially change the process flow schematic in the current record. Do you have specifics about these fire incidents?
- What is the expected and/or observed maximum temperature (or temperature ranges) typically found in GS-200 during operation of the gasifier?
- Similarly, what are the Oxygen levels typically found in GS-200 during operation of the gasifier?
- After the gasification process, does the medical waste "biochar" have any commercial value and for what purpose? or is it the intention of VES to landfill the material?
- The previous TDEC permit application (signed 1/13/2020) contained a 2 page description relative to "Regulated Medical Waste" and a listing of "WASTE THAT WILL BE TREATED IN COVINGTON" (outlined A through D) ... this page was omitted after the secondary submission of the TDEC permit application (signed 2/24/2020); was this a deliberate omission or will there be an updated page submitted ? (obviously without the pharmaceutical waste references)

- Lastly, there appears to be some typos re the Emissions Calculations Tables (in the TDEC permit application signed 2/24/2020) where references are made to HMIWI ... Subpart "Ee" is being cited but I believe the correct citation VES is intending is Subpart "Ec".

While I am sure to have some additional questions as the review continues; any detailed responses to the above would be most appreciated.

Thanks so much.

Mark Bloeth
US EPA Region 4
Air and Radiation Division
Communities and Air Toxics Section
(404) 562-9013